

CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

Purpose Permit number: CPS 7185/1

Permit Holder: Shire of Esperance

Duration of Permit: From 23 September 2017 to 23 September 2022

The Permit Holder is authorised to clear native vegetation subject to the following conditions of this Permit.

PART I-CLEARING AUTHORISED

1. Purpose for which clearing may be done

Clearing for the purpose of road widening and upgrades.

2. Land on which clearing is to be done

Howick Road reserve (PINs 11644423 and 11645175), Condinup.

3. Area of Clearing

The Permit Holder shall not clear more than 6.9 hectares of native vegetation within the area cross-hatched yellow on attached Plan 7185/1a.

4. Application

This Permit allows the Permit Holder to authorise persons, including employees, contractors and agents of the Permit Holder, to clear native vegetation for the purposes of this Permit subject to compliance with the conditions of this Permit and approval from the Permit Holder.

5. Type of clearing authorised

This Permit authorises the Permit Holder to clear native vegetation for the activities described in condition 1 of this Permit to the extent that the Permit Holder has the power to carry out works involving clearing for those activities under the *Local Government Act 1995* or any other written law.

PART II - MANAGEMENT CONDITIONS

6. Avoid, minimise etc. clearing

In determining the amount of native vegetation to be cleared authorised under this Permit, the Permit Holder must have regard to the following principles, set out in order of preference:

- (a) avoid the clearing of native vegetation;
- (b) minimise the amount of native vegetation to be cleared; and
- (c) reduce the impact of clearing on any environmental value.

7. Dieback and weed control

When undertaking any clearing or other activity authorised under this Permit, the Permit Holder must take the following steps to minimise the risk of the introduction and spread of *weeds* and *dieback*:

- (a) clean earth-moving machinery of soil and vegetation prior to entering and leaving the area to be cleared;
- (b) ensure that no *dieback* or *weed*-affected soil, *mulch*, *fill* or other material is brought into the area to be cleared; and
- (c) restrict the movement of machines and other vehicles to the limits of the areas to be cleared.

8. Offset – Exchange Road reserve (PIN 11645701) and un-named road reserve (PIN 11645698) The Permit Holder shall:

- (a) by 23 September 2018:
 - (i) relinquish the area cross-hatched red on attached Plan 7185/1b within the Exchange Road reserve (PIN 11645701) and an un-named road reserve (PIN 11645698), Howick, to the Department of Biodiversity, Conservation and Attractions for addition to the Alexander Nature Reserve (Crown Reserve 27086) and an un-named Nature Reserve (Crown Reserve 27087); and
 - (ii) provide to the CEO a copy of the executed land transfer;
- (b) in the event that the road reserves are not relinquished in accordance with condition 8(a):
 - (i) submit a new offset proposal for the CEO's approval by 23 December 2018; and
 - (ii) in preparing an offset proposal in accordance with 8(b)(i), the Permit Holder must comply with the principles in the Government of Western Australia, WA Environmental Offsets Policy, September 2011, and have regard to the WA Environmental Offsets Guidelines, August 2014.

DEFINITIONS

The following meanings are given to terms used in this Permit:

dieback means the effect of Phytophthora species on native vegetation;

fill means material used to increase the ground level, or fill a hollow;

mulch means the use of organic matter, wood chips or rocks to slow the movement of water across the soil surface and to reduce evaporation;

weed/s means any plant -

- (a) that is a declared pest under section 22 of the *Biosecurity and Agriculture Management Act* 2007: or
- (b) published in a Department of Parks and Wildlife Regional Weed Rankings Summary, regardless of ranking; or
- (c) not indigenous to the area concerned.

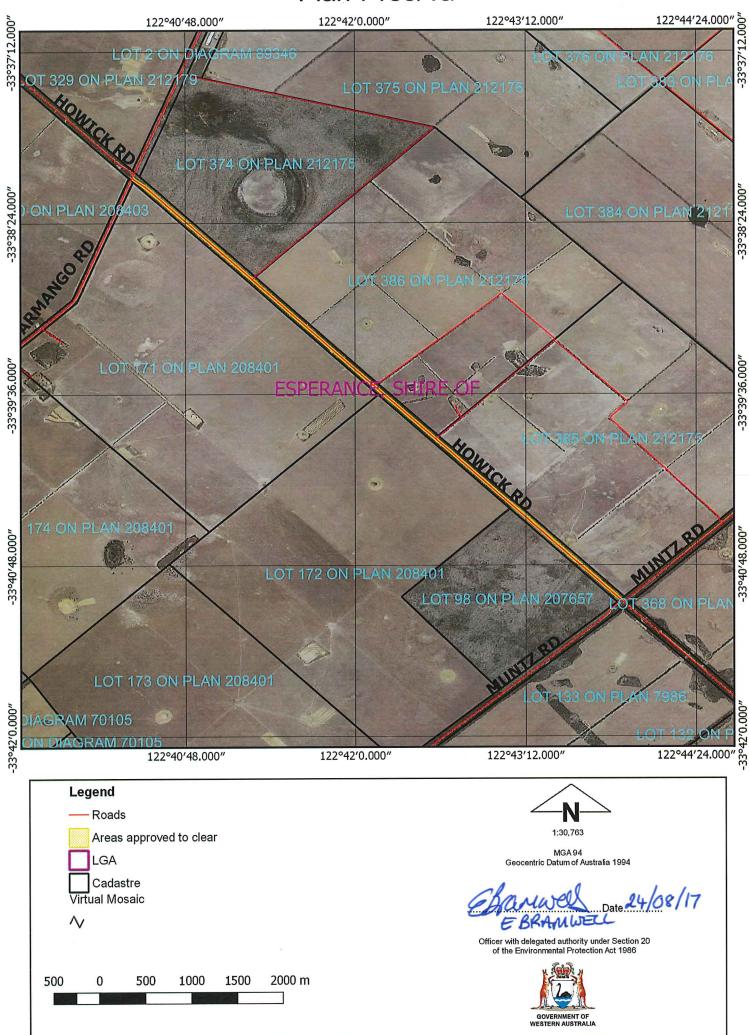
Emma Bramwell A/ MANAGER

CLEARING REGULATION

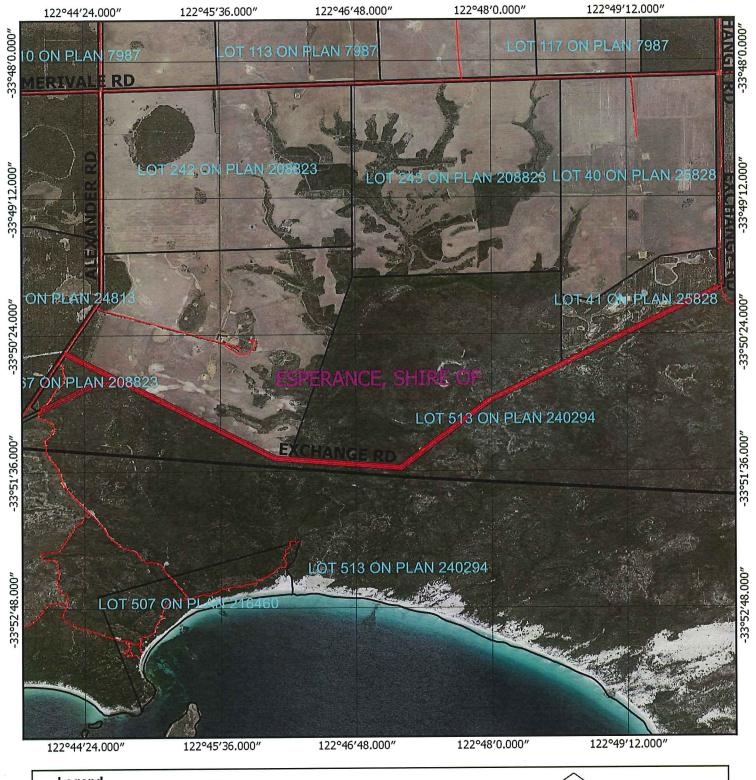
Officer delegated under Section 20 of the Environmental Protection Act 1986

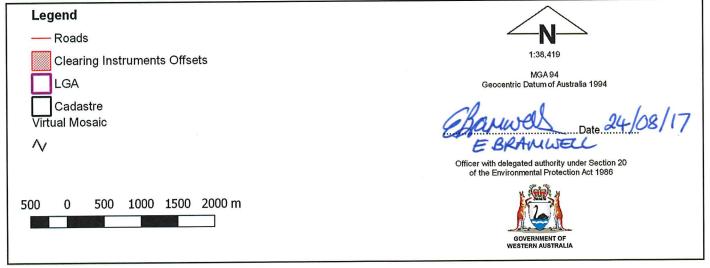
24 August 2017

Plan 7185/1a



Plan 7185/1b







Government of Western Australia

Department of Water and Environmental Regulation Clearing Permit Decision Report

1. Application details

Permit application details

Permit application No.:

7185/1

Permit type:

Purpose Permit

1.2. Applicant details

Applicant's name:

Shire of Esperance

1.3. Property details

Property:

ROAD RESERVE - 11644423, CONDINGUP ROAD RESERVE - 11645175, HOWICK

Colloquial name:

Local Government Authority:

DER Region: DPaW District:

Goldfields **ESPERANCE**

Howick Road

Localities:

CONDINGUP and HOWICK

ESPERANCE, SHIRE OF

Application 1.4. Clearing Area (ha)

No. Trees

Method of Clearing Mechanical Removal For the purpose of:

Road construction or upgrades

6.9

Decision on application 1.5. **Decision on Permit Application:**

Decision Date:

Reasons for Decision:

Grant

24 August 2017

The clearing permit application was received on 18 July 2016 and has been assessed against the clearing principles, planning instruments and other matters in accordance with section 510 of the Environmental Protection Act 1986 (EP Act). It has been concluded that the proposed clearing is at variance to Principles (a), (d) and (e), may be at variance to Principles (b) and (h), and is not likely to be at variance to the remaining Principles.

The Delegated Officer determined that the proposed clearing will lead to the loss of a significant remnant within an extensively cleared area that includes 3.06 hectares of native vegetation in an excellent (Keighery, 1994) condition that contains a threatened ecological community (TEC), forms part of an ecological linkage connecting two significant remnants of native vegetation, and provides suitable foraging habitat for Carnaby's cockatoo (Calyptorhynchus latirostris) listed as rare or likely to become extinct under the Wildlife Conservation Act 1950 and endangered under the Commonwealth Environment Protection and Biodiversity Conservation Act 1999.

In order to mitigate the environmental impacts outlined above, the permit holder is required to imlement weed and dieback management measures, and pursuant to section 511(2)(b) of the EP Act to provide an offset that is consistent with with the WA Environmental Offsets Policy (2011) and WA Environmental Offsets Guidelines (2014).

The Delegated Officer has approved an offset proposed by the applicant which comprises the transfer of 28.75 hectares of native vegetation within the Exchange Road reserve (PIN 11645701) and an un-named road reserve (PIN 11645698) to the Department of Biodiversity, Conservation and Attractions for addition to the Alexander Nature Reserve (Crown Reserve 27086) and an un-named Nature Reserve (Crown Reserve 27087).

2. Site Information

Existing environment and information

2.1.1. Description of the native vegetation under application

Vegetation Description

Beard vegetation association 47 is described as Shrublands: tallerack malleeheath (Shepherd et al, 2001).

Clearing Description

The applicant has applied to clear 6.9 hectares of native vegetation over a 7.7 kilometre stretch of Howick Road, for the purpose of road widening and upgrades.

Vegetation Condition

Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery 1994)

To

Comment

The condition and description of the vegetation was determined via a site inspection conducted by officers from the former Department of Environment Regulation (DER) on 13 September 2016 and a flora and vegetation survey conducted by the Shire of Esperance (DER, 2016; Shire of Esperance, 2016).

Excellent; Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (Keighery, 1994).

3. Assessment of application against clearing principles

(a) Native vegetation should not be cleared if it comprises a high level of biological diversity.

Comments

Proposed clearing is at variance to this Principle

The application is to clear 6.9 hectares of native vegetation within the Howick Road reserve (PINs 11644423 and 11645175), Condinup, for the purpose of widening and upgrading a 7.7 kilometre stretch of road between the Parmango Road south and Muntz road intersections up to 30 metres wide. The applicant advised that the current road form is approximately 22 metres in width although a site inspection of the application area undertaken by DER officers determined areas of 26 metres width. The applicant advised that an additional two metres from the existing back slope from both sides of the road is required for the proposed works.

A Level 1 flora survey conducted by the applicant on 7 July 2016 and the DER site inspection identified that the majority of the application area comprises of roadside vegetation of open mallee shrublands of Tallerack mallee heath in an excellent (Keighery, 1994) condition. Approximately one kilometre of the application area on the south side of Howick Road reserve has been subject to disturbance, contains introduced *Eucalyptus* species in an old gravel pit and is subject to weed invasion throughout the understorey, and is in a degraded (Keighery, 1994) condition (Shire of Esperance, 2016; DER, 2016).

The application area is located within a fragmented landscape, with 8.6 per cent native vegetation (4,171 hectares) remaining within the local area (defined as a 10 kilometre radius around the application area). The application area forms part of an ecological linkage connecting the Beaumont Nature Reserve with a large remnant on the south western side of Howick Road. The proposed clearing will not sever the ecological linkage, however may in the removal of fauna habitat and contribute to the degradation of the environmental values of the Beaumont Nature Reserve.

According to available databases, no rare and five species of priority (P) flora have been recorded within the local area. Two plants of the P4 species *Grevillea baxteri* and six plants of the P3 species *Persoonia scabra* were recorded within the application area during the Level 1 flora survey (Shire of Esperance, 2016). These occurrences of priority flora are both within their known ranges, and these species may occur within adjacent roadside vegetation and in nearby conservation reserves. The former Department of Parks and Wildlife (Parks and Wildlife) advised that the occurrence of *Persoonia scabra* within the application area may be significant on a local scale, however the proposed clearing of two *Grevillea baxteri* plants and six *Persoonia scabra* plants is unlikely to be considered significant to the conservation of these species (Parks and Wildlife, 2016a).

As discussed under Principle (b), the application area contains foraging habitat for Carnaby's cockatoo (*Calyptorhynchus latirostris*) listed as rare or likely to become extinct under the *Wildlife Conservation Act 1950* (WC Act), may contain suitable habitat for southern death adder (*Acanthophis antarcticus*) listed as P3 by Parks and Wildlife, and provides connectivity between remnant vegetation within a fragmented landscape.

As discussed under Principle (d), the application area contains 3.06 hectares of native vegetation that is consistent with the Commonwealth-listed threatened ecological community (TEC) 'Proteaceae Dominated Kwongkan Shrublands of the Southeast Coastal Floristic Province of Western Australia' (Kwongkan Shrublands TEC).

Beaumont Nature Reserve abuts the road reserve on the north eastern side of Howick Road. The proposed clearing will increase the risk of weeds and dieback spreading into this conservation area. Weed and dieback mitigation measures will assist in mitigating this risk.

The application area contains vegetation in an excellent (Keighery, 1994) condition of which 3.06 hectares has been confirmed as a Commonwealth listed TEC, provides suitable habitat for conservation significant fauna and flora, and provides connectivity between remnants of native vegetation within an extensively clearing landscape.

Given the above, the proposed clearing is at variance to this Principle.

Methodology

References: Parks and Wildlife (2016a) DER (2016) Keighery (1994) Shire of Esperance (2016)

GIS Databases: NLWRA, Current Extent of Native Vegetation SAC Bio Datasets (Accessed July 2017) Parks and Wildlife Tenure

(b) Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a significant habitat for fauna indigenous to Western Australia.

Comments Proposed clearing may be at variance to this Principle

The application area is located within a highly cleared landscape with 8.6 per cent of native vegetation (4,171 hectares) remaining in the local area (10 kilometre radius). The application area is likely to act as a corridor that facilitates the movement of fauna within and across the landscape, with the road reserve proposed for clearing providing connection between areas of remnant vegetation. Noting that the proposed clearing does not include the entire width of the roadside vegetation and will not completely sever the roadside corridor, the proposed clearing may impact on the functionality of this reserve to support fauna habitat within a highly cleared landscape and will contribute to the degradation of suitable nearby habitat.

A total of three conservation significant fauna have been recorded within the local area (DBCA, 2007-). These species include the Carnaby's cockatoo (*Calyptorhynchus latirostris*) listed as rare or likely to become extinct under the WC Act, white-bellied sea-eagle (*Haliaeetus leucogaster*) protected under international agreement and southern death adder (*Acanthophis antarcticus*) listed as P3 by Parks and Wildlife. Of these, species are likely to utilise the application area for foraging and breeding habitat. These are Carnaby's cockatoo and southern death adder.

Carnaby's cockatoo forages on the seeds, nuts and flowers of a large variety of plants including proteaceous species (*Banksia*, *Hakea*, *Grevillea*), as well as *Allocasuarina* and *Eucalyptus* species, *Corymbia calophylla* and a range of introduced species (Valentine and Stock, 2008). A Level 1 flora survey identified one primary habitat type, described as open mallee shrublands of Tallerack mallee heath (Shire of Esperance, 2016). The flora survey also confirmed that 3.06 hectares of the vegetation proposed for clearing, is consistent with the Commonwealth listed TEC 'Proteaceae dominated kwongkan shrublands of the southeast coastal floristic province of Western Australia'. During DER's site inspection a flock of five Carnaby's cockatoo were observed foraging within and adjacent to the application area (DER, 2016). Given the flora species identified during the flora survey, and the observation of Carnaby's cockatoo during DER's site inspection, the application area contains foraging habitat for this species.

The southern death adder occurs within a wide variety of habitats in association with deep leaf litter, including coastal heathlands and chenopod dominated shrublands (DEHP 2015). Given the vegetation type present within the application area, the application area may contain suitable habitat for this species.

Given the excellent (Keighery, 1994) condition of the vegetation within the application area, the presence of suitable habitat for conservation significant fauna within a fragmented landscape, and the recent records of black cockatoos in the vicinity of the application area, the application area may contain significant habitat for conservation significant fauna.

Given the above, the proposed clearing may be at variance to this Principle.

Methodology

References: DBCA (2007-) DER (2016) Keighery (1994) Shire of Esperance (2016) Valentine and Stock (2008)

GIS Databases: NLWRA, Current Extent of Native Vegetation SAC Bio Datasets (Accessed July 2017)

(c) Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, rare flora.

Comments Proposed clearing is not likely to be at variance to this Principle

A search of DBCA's rare flora database revealed that there are no records of rare flora species occur within the local area (10 kilometre radius). The closest rare flora species is mapped approximately 11 kilometres north east of the application area and occurs within sandy soils along creek lines, rivers or margins of saline depressions (Western Australian Herbarium, 1998-). Given there are no watercourses present within the application area, it is considered that the application area is unlikely to contain suitable habitat for this species.

Given the above, the proposed clearing is not likely to be at variance to this Principle.

Methodology References:

Western Australian Herbarium (1998-)

GIS Databases:

SAC Bio Datasets (Accessed July 2017)

(d) Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of a threatened ecological community.

Comments

Proposed clearing is at variance to this Principle

According to available databases, the majority of the application area intersects the Kwongkan Shrublands TEC. This TEC is listed as endangered under the Commonwealth *Environment Protection and Biodiversity Conservation Act* 1999.

According to the Approved Conservation Advice for Proteaceae Dominated Kwongkan Shrublands of the southeast coastal floristic province of Western Australia (Approved Conservation Advice), the Kwongkan Shrublands TEC is predominantly located within the Esperance Sandplains and Mallee bioregions, and typically occurs on sandplains, occupying lower and upper slopes and ridges, as well as uplands, where rainfall ranges from 400 to 800 millimetres a year. The TEC largely occurs on duplex soils and deep to shallow soils on the sandplains, and comprises shrublands dominated by plants from the family Proteaceae, including plants from the genera Adenanthos, Banksia, Grevillea, Hakea, Isopogon and Lambertia (TSSC, 2014).

Detailed mapping of the Kwongkan Shrublands TEC is not available, and ground truthing is required to verify if a site meets the required diagnostic criteria of this TEC (Commonwealth of Australia, 2013). The applicant's flora survey identified numerous species from the Proteaceae family and found that approximately 3.06 hectares of the application area met the key diagnostic characteristics of this TEC (Shire of Esperance, 2016).

The Approved Conservation Advice notes several key characteristics in determining the significant impacts on the Kwongkan Shublands TEC, including the connectivity to other remnant native vegetation, the presence of listed threatened species, condition of vegetation, high species richness, good faunal habitat, areas with few weeds and no dieback impacts, and whether the TEC occurs in an area that has been heavily cleared (TSSC, 2014).

While the proposed clearing does not include the entire width of the roadside vegetation, 3.06 hectares of native vegetation in an excellent (Keighery, 1994) condition which meets the key diagnostic characteristics of the Kwongkan Shublands TEC will be directly impacted by the proposed clearing, and adjacent similar native vegetation will become more susceptible increased edge effects.

Parks and Wildlife advised that although the application area is limited in the overall context of the full range of the Kwongkan Shrublands TEC, the application area occurs within an area that is considered a key linear connecting linkage between two large remnants within a highly cleared landscape (Parks and Wildlife, 2016b).

Given the above, the proposed clearing is at variance to this Principle.

Methodology

References:

Commonwealth of Australia (2013) Keighery (1994) Parks and Wildlife (2016b)

Shire of Esperance (2016)

TSSC (2014)

GIS Databases:

SAC Bio Datasets (Accessed July 2017)

(e) Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared.

Comments

Proposed clearing is at variance to this Principle

The national objectives and targets for biodiversity conservation in Australia has a target to prevent clearance of ecological communities with an extent below 30 per cent of that present pre-1750, below which species loss appears to accelerate exponentially at an ecosystem level (Commonwealth of Australia, 2001).

As indicated in Table 1, the bioregion, local government authority and mapped Beard vegetation vegetation association retain greater than the recommended 30 per cent threshold for representation.

The local area (10 kilometre radius) retains approximately 8.6 per cent (4,171 hectares) native vegetation cover. The application area represents approximately 0.165 per cent of the native vegetation cover within the local area and the proposed clearing would reduce this extent to 8.435 per cent (4,164.1 hectares).

Noting the above, and that the application area contains vegetation in an excellent (Keighery, 1994) condition which contains 3.06 hectares of native vegetation that is representative of a TEC, may contain significant habitat for fauna including foraging habitat for Carnaby's cockatoo, and provides an ecological linkage between the Beaumont Nature Reserve and other areas of remnant vegetation in the local area, the application area is considered to be significant as a remnant in an extensively cleared area.

Given the above, the proposed clearing is at variance to this Principle.

Table 1: Vegetation extents

able 1. vegetation externs	Pre-European (ha)	Current Extent (ha)	Remaining (%)	Extent in DBCA Managed Lands (%)
IBRA Bioregion*				
Esperance Plains	2,899,941	1,495,046	52	55
Local government authority*				
Shire of Esperance	4,459,671	3,210,979	72	30
Beard Vegetation Association in	n Bioregion*			
47	959,936	336,782	35	52

Methodology

References:

Commonwealth of Australia (2001) Government of Western Australia (2016) Keighery (1994)

GIS Databases:

NLWRA, Current Extent of Native Vegetation

Pre-European Vegetation

(f) Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland.

Comments

Proposed clearing is not likely to be at variance to this Principle

According to available databases, no watercourses or wetlands are mapped within the application area and no riparian vegetation was observed during DER's site inspection (DER, 2016). The closest hydrological feature is a non-perennial lake located approximately 600 metres east of the northern end of the application area. Given the distance to this hydrological feature, it is considered that the proposed clearing is unlikely to impact upon riparian vegetation growing in association with a wetland or watercourse.

Given the above, the proposed clearing is not likely to be at variance to this Principle.

Methodology

References:

DER (2016)

GIS Databases: Hydrography, linear Hydrography, hierarchy

(g) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.

Comments

Proposed clearing is not likely to be at variance to this Principle

The soils within the application area have been mapped by the Department of Agriculture and Food Western Australia (DAFWA) as Esperance 6 Subsystem and are described as red-brown to grey brown alluvial sands (Schoknecht et al., 2004).

DAFWA mapping indicates that the soil unit present within the application area has a high to extreme risk of wind erosion, the second highest rating out of six risk categories (Schoknecht et al., 2004). Noting the linear shape of the application area, it is expected that this risk can be managed through appropriate land management practices which do not expose the sandy soils for extended durations.

The topography of the application area is relatively flat and the annual rainfall is 600 millimetres. Groundwater salinity within the application area has been mapped as saline at between 7,000-14,000 milligrams per litre total dissolved solids. Noting this, the porous nature of sandy soils within the application area, the linear shape of the application area, and the relatively low rainfall, the proposed clearing is unlikely to cause appreciable land degradation through water erosion, waterlogging or salinity.

Given the above, the proposed clearing is not likely to be at variance to this Principle.

Methodology

References:

Schoknecht et al. (2004)

GIS Databases: Soils, Statewide Groundwater salinity Land Degradation datasets

(h) Native vegetation should not be cleared if the clearing of the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation area.

Comments

Proposed clearing may be at variance to this Principle

The closest conservation area is the A class Beaumont Nature Reserve which adjoins the north east side of the Howick Road reserve.

As discussed under Principle (a), the application area provides a connection between the Beaumont Nature Reserve and a large remnant, and the proposed clearing will not sever this connection, however it will reduce the width of the corridor and is likely to contribute to increased edge effects to adjacent vegetation. Noting this, the proposed clearing may indirectly impact on the environmental values of a conservation area.

Given the above, the proposed clearing may be at variance to this Principle.

Weed and dieback management practices will ensure that the potential environmental impacts to the Beaumont Nature Reserve are minimised.

Methodology

GIS Databases:

Parks and Wildlife Tenure

(i) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause deterioration in the quality of surface or underground water.

Comments

Proposed clearing is not likely to be at variance to this Principle

As discussed under Principle (f), the closest water feature to the application area is a minor non-perennial lake located approximately 600 metres east of the northernmost end of the clearing area. Given the distance to nearest mapped hydrological features, the proposed clearing is not likely to cause deterioration in the quality of surface water.

Groundwater salinity mapped within the application area is between 7,000-14,000 milligrams per litre total dissolved solids (saline). Given the linear shape of the application area and noting that the proposed clearing does not include the entire width of the roadside vegetation, it is considered that the proposed clearing is unlikely to lead to a perceptible rise in the water table and thus an increase in groundwater salinity levels.

Given the above, the proposed clearing is not likely to be at variance to this Principle.

Methodology

GIS Databases:

Hydrography, linear Hydrography, hierarchy Groundwater salinity

(j) Native vegetation should not be cleared if clearing the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding.

Comments

Proposed clearing is not likely to be at variance to this Principle

The soils within the application area have been mapped by DAFWA as Esperance 6 Subsystem and are described as red-brown to grey brown alluvial sands (Schoknecht et al., 2004). DAFWA has mapped the flood risk for the application area as less than three per cent of the map unit with a moderate to high flood risk, the lowest risk category (Schoknecht et al., 2004). Given the mapped low level of flood risk, the linear nature of the clearing and that no watercourses are present within the application area, it is unlikely that the proposed clearing will cause or exacerbate flooding.

Given the above, the proposed clearing is not likely to be at variance to this Principle.

Methodology

References:

Schoknecht et al. (2004)

GIS Databases: Hydrography, linear Hydrography, hierarchy Land Degradation datasets

Planning instruments and other relevant matters.

Comments

The application is to clear 6.9 hectares of native vegetation within the Howick Road reserve (PINs 11644423 and 11645175), Condinup, for the purpose of widening and upgrading a 7.7 kilometre stretch of road between the Parmango Road south and Muntz road intersections up to 30 metres wide.

The application was advertised in *The West Australian* newspaper on 8 August 2016, inviting submissions from the public within a 21 day period. No submissions were received in relation to this application.

No Aboriginal Sites of Significance occur within the application area.

CPS 7185/1, 24 August 2017

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GIS Databases:

Aboriginal Sites of Significance

4. Applicant's submission

Comments

On 9 January 2017, a DER Delegated Officer wrote to the applicant, outlining the environmental impacts identified during the assessment of the application. The letter invited the applicant to provide advice addressing the issues identified, and on how impacts would be avoided or minimised and unavoidable impacts offset (DER ref. A1356634).

On 14 March 2017, the applicant advised that the road needs to be widened as part of strategic upgrades to the road network, that all efforts would be taken to ensure clearing is kept to a minimum within the footprint area, that approximately three metres either side of the existing road are likely to be cleared, and that the additional footprint allows for flexibility in the placement of drainage (DER ref. A1396185).

On 16 March 2017, the applicant was advised that the residual impacts of the proposed clearing for which an offset is required are:

- 3.06 hectares of the Kwongkan Shrublands TEC; and
- 6.9 hectares of native vegetation that is significant as a remnant in an extensively cleared area (DER ref. A1396215).

On 30 May 2017, the applicant advised that an unconstructed portion of road reserve containing native vegetation consistent with the Kwongkan Shrublands TEC would be offered as an offset for inclusion in the conservation estate (DER ref, A1456550). On 6 June 2017, the applicant provided an offset proposal comprising the transfer of 52 hectares of native vegetation within the Exchange Road reserve (PIN 11645701) and an un-named road reserve (PIN 11645698) to DBCA for addition to the Alexander Nature Reserve (Crown Reserve 27086) and an un-named Nature Reserve (Crown Reserve 27087) (DER ref. A1456560).

The applicant advised that the proposed transfer is consistent with a recommendation in the *Esperance and Recherche Parks and Reserves Management Plan 84* (2016) and is supported by DBCA (DER ref. A1490382).

A calculation using the Commonwealth *Offsets Assessment Guide* has determined that 28.75 hectares of the proposed offset site is adequate to counterbalance the significant residual environmental impacts of the proposed clearing. The remainder of the site (23.25 hectares) can be banked for other authorised clearing.

5. References

Commonwealth of Australia (2001) National Objectives and Targets for Biodiversity Conservation 2001-2005, Canberra. Commonwealth of Australia (2013) Map of 'Proteaceae Dominated Kwongkan Shrublands of the Southeast Coastal Floristic Province of Western Australia'. Department of the Environment, Canberra, Australia.

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Department of Parks and Wildlife (Parks and Wildlife) (2016a) Species and Communities Flora Advice received in relation to clearing permit application CPS 7185/1, received 8 September 2016. Department of Parks and Wildlife, Western Australia (DER Ref: A1171020).

Department of Parks and Wildlife (Parks and Wildlife) (2016b) Species and Communities TEC and PEC Advice for Clearing Permit CPS 7185/1. Department of Parks and Wildlife. Western Australia. (DER Ref: A1171009).

Government of Western Australia (2016). 2016 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). Current as of October 2016. WA Department of Parks and Wildlife, Perth.

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Shepherd, D.P., Beeston, G.R. and Hopkins, A.J.M. (2001) Native Vegetation in Western Australia, Extent, Type and Status.

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Valentine L. and Stock W. (2008) Food Resources of Carnaby's Black-Cockatoo (Calyptorhynchus latirostris) in the Gnangara Sustainability Strategy study area. Unpublished report to the Forests Products Commission. Available from: http://ro.ecu.edu.au/ecuworks/6147.

Western Australian Herbarium (1998-) FloraBase - The Western Australian Flora. Department of Parks and Wildlife. http://florabase.dpaw.wa.gov.au/ (Accessed 31/07/2017).